

STATEMENT OF BASIS

ESCOREZ 1000 (E-1000) Unit
Baton Rouge Chemical Plant
ExxonMobil Chemical Company
Baton Rouge, East Baton Rouge Parish, Louisiana
Agency Interest Number: 286
Activity Number: 20070022
Proposed Permit 2156-V1

I. APPLICANT:

Company:

ExxonMobil Chemical Company
P.O. Box 241, Baton Rouge, LA 70821

Facility:

Baton Rouge Chemical Plant
4999 Scenic Highway, Baton Rouge, East Baton Rouge Parish, Louisiana 70805
Approximate UTM coordinates are 675.70 kilometers East and 3374.85 kilometers North, Zone 15

II. FACILITY AND CURRENT PERMIT STATUS:

The ExxonMobil Baton Rouge Complex was established in 1909. Manufacturing operations have been ongoing continuously at the site since that time. The ExxonMobil Chemical Company Baton Rouge Chemical Plant (BRCP) was founded in 1940 and played an important role in producing synthetic rubber for the military during World War II. It is now one of four ExxonMobil chemical manufacturing facilities in the Baton Rouge area. The Plant also has several manufacturing units that are located within the adjacent Refinery.

The site manufactures a variety of first generation petrochemical products used by others to produce a variety of consumer products. Feeds come primarily from the adjacent ExxonMobil Refinery, although feedstocks are also purchased from outside suppliers and delivered by tanker or barge.

The facility received all its Part 70 permits for the entire facility. The following table lists all of the other units at BRCP and their permitted status:

Unit	Permit No.	Date Issued	Permitting Status
Aromatics	2299-V5	7/18/2008	Received Title V
AWT	3006-V0	6/6/2006	Received Title V
AWT Thermal Combustor	1977-V0	10/19/2003	Received Title V
BRTG	2012-V0	11/18/2002	Received Title V
Coproducts	2367-V0	2/17/2006	Received Title V
E-5000	1911-V1	12/12/2006	Received Title V
Halobutyl Production	2166-V1	7/16/2004	Received Title V

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Unit	Permit No.	Date Issued	Permitting Status
HCD	2314-V0	2/27/2006	Received Title V
IPA	1924-V2	9/27/2005	Received Title V
Maintrain Ethylene	2031-V6	7/6/2007	Received Title V
MEK/SBA	2281-V1	11/19/2007	Received Title V
Neo Acids	2379-V0	12/2/2005	Received Title V
NOVA Units	2123 -V0	5/8/2006	Received Title V
OXO Alcohol	2365-V1	9/15/2006	Received Title V
OXO Tankfield	2393-V0	9/11/2005	Received Title V
PALA	1200-V2	7/16/2004	Received Title V
Plant Infrastructure	2390-V0	1/26/2006	Received Title V
Plasticizer	2320-V0	12/20/2005	Received Title V
POX	2210-V0	4/4/2005	Received Title V
RGR	2361-V1	8/15/2006	Received Title V
VISTALON	2376-V1	8/13/2008	Received Title V
#5 LE/Poly	2396-V0	10/31/2005	Received Title V

III. PROPOSED PERMIT / PROJECT INFORMATION:

Proposed Permit

A permit application dated December 21, 2007 was submitted requesting a renewal and minor modification of the Part 70 operating permit for ESCOREZ 1000 (E-1000) Unit.

A notice requesting public comment on the proposed permit was published in The Advocate, Baton Rouge, Louisiana, on *[Insert Date]*. The proposed permit was also sent to US EPA Region VI.

The E-1000 Unit currently operates under Permit No. 2156 -V0, issued on July 3, 2003.

Project Description

This permit renewal also includes the following changes:

- Install a jump over to allow solvent from existing Tank T-1310 to be stored in existing tanks T-1305 and T-1306. Although these tanks vent to the vapor recovery system, the net emission changes are reviewed for the Nonattainment New Source Review (NNSR) purposes. In addition, there will also be a small number of new fugitive components associated with the proposed jump over.
- Change the service of existing tanks T-1305 and T-1306 to allow the flexibility to store an additional resin product.
- Reconcile the emissions for Source M-50 (Secondary Wastewater Emissions). The

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emissions basis is changed from the use of a site specific factor to using WATER9, Version 2.0.

- Include the leg landing loss emissions for Tanks T-1775, T-1966, and T-1967. They are included as a work activity.
- Add the hydrochloric acid emissions from the Gas Scrubber Vent (V-194).
- Provide the Compliance Assurance Monitoring (CAM) plans for sources T-1969 and V-294.
- Incorporate the requirements of the Miscellaneous Organic NESHAPs (MON) MACT (Subpart FFFF) and Site Remediation MACT (Subpart GGGGG) in the regulatory analysis tables.

Permitted Air Emissions

Estimated emissions from E-1000 Unit in tons per year are as follows:

<u>Pollutant</u>	<u>Before</u>	<u>After</u>	<u>Change</u>
PM ₁₀	8.09	2.34	-5.75
SO ₂	-	-	-
NO _x	-	-	-
CO	-	-	-
VOC	34.72	41.83	+7.11

VOC LAC 33:III Chapter 51 Toxic Air Pollutants (TAPs):

<u>Pollutant</u>	<u>Before</u>	<u>After</u>	<u>Change</u>
1,3-Butadiene	0.01	0.01	-
Benzene	1.05	1.01	-0.04
Cumene	0.10	0.02	-0.08
Ethyl Benzene	0.14	0.03	-0.11
n-Hexane	1.76	2.08	+0.32
Methanol	0.01	0.01	-
Naphthalene	0.17	-	-0.17
Styrene	1.39	1.33	-0.06
Toluene	0.34	0.31	-0.03
2,2,4-Trimethylpentane	0.07	0.02	-0.05
Xylene (mixed isomers)	0.28	0.21	-0.07
Total	5.32	5.03	-0.29

Other VOC (TPY):

36.8

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Prevention of Significant Deterioration (PSD) and Non-Attainment New Source Review (NNSR) Applicability

The proposed changes in E-1000 will result in very small emission changes at the flares (part of the Plant Infrastructure Permit No. 2390-V1). As shown in the table below, there will be very small increases in CO, NO_x, PM₁₀, SO₂, and H₂S emissions. These increases are based on the evaluation of the past actual emission of the project-impacted sources versus the proposed permitted potential emissions. The resulting increases in emissions will be less than the PSD Significant Threshold for these criteria pollutants. Therefore, PSD permitting requirements are not triggered.

<u>Criteria Pollutant</u>	<u>PSD Significant Threshold(TPY)</u>	<u>Total Project -Impacted Emissions Increases</u>
PM ₁₀	25/15	0.02
SO ₂	40	0.001
CO	100	0.51
NO _x	40	0.10
H ₂ S	10	0.03

The VOC emission increases associated with the projects are 7.9 tons per year. Since the project increases are less than the 25 tons per year Nonattainment New Source Review (NNSR) analysis trigger threshold, no further NNSR evaluation for VOC is required.

The NO_x emissions increases associated with the projects are 0.1 tons per year. Since the project increases are less than the 25 tons per year Nonattainment New Source Review (NNSR) analysis trigger threshold, no further NNSR evaluation for NO_x is required.

Type of Review

This application was reviewed for compliance with the Louisiana Part 70 operating permit program, Louisiana Air Quality Regulations, Louisiana Comprehensive Toxic Air Pollutant Emission Control Program, NSPS and NESHAP. PSD does not apply.

Streamlined Equipment Leak Monitoring Program

It is required that the E-1000 complies with a streamlined equipment leak-monitoring program. Compliance with the streamlined program shall serve to comply with each of the fugitive emission monitoring programs being streamlined, as indicated in the following table:

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Unit or Plant Site	Program Being Streamlined	Stream Applicability	Overall Most Stringent Program
FUG059 U-49A FUG058 U-105	40 CFR 63 Subpart UU referencing Subpart FFFF LA Non-HON MACT 40 CFR 61 Sub J & V LAC 33:III.2122	5% VOHAP 5% VOTAP 10% Benzene 10% VOC	40 CFR 63 Subpart UU (referencing Subpart is 40 CFR 63 Subpart FFFF)
FUG060U-45D	40 CFR 63 Subpart UU referencing Subpart FFFF 5% VOTAP 5% VOTAP LAC 33:III.2122 40 CFR 61 Sub J & V 40 CFR 60 Subpart VV	5% VOHAP 5% VOTAP 10% VOC 10% Benzene 10% VOC	40 CFR 63 Subpart UU (referencing Subpart is 40 CFR 63 Subpart FFFF)

MACT requirements

These regulations define maximum achievable control technology (MACT) standards for stationary source categories of hazardous air pollutants (HAPs). These HAPs were listed in the Clean Air Act Amendments of 1990.

BRCP is a plant site that is a major source of HAPs because it has the potential to emit, in the aggregate, 10 tons per year or more of any hazardous air pollutant, or 25 tons per year of any combination of hazardous air pollutants. The subparts listed below contain applicable requirements to sources in this permit.

40 CFR 61 Subpart FF
40 CFR 63 Subpart FFFF
40 CFR 63 Subpart GGGG

Air Quality Analysis

Emissions were reviewed by the Air Quality Assessment Division to ensure compliance with the NAAQS and AAS. The proposed project did not require the applicant to model emissions.

General Condition XVII Activities

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to draft permit AIR PERMIT BRIEFING SHEET, VIII.

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Insignificant Activities

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities, refer to draft permit AIR PERMIT BRIEFING SHEET, IX.

Regulatory Analysis

The applicability of the appropriate regulations is straightforward and provided in the Specific Requirements of the proposed Part 70 permit. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are provided in the Specific Requirements of the proposed Part 70 permit.

IV. PERMIT SHIELDS

No permit shield will be granted with the proposed permits.

V. PERIODIC MONITORING

No periodic monitoring is required.

VI. Glossary

Carbon Monoxide (CO) – A colorless, odorless gas which is an oxide of carbon.

Maximum Achievable Control Technology (MACT) - The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

National Emission Standards for Hazardous Air Pollutants (NESHAPs) - The NESHAPs were originally required by the 1970 Clean Air Act (CAA). These standards were developed for sources and source categories that were determined to pose adverse risk to human health by the emission of hazardous air pollutants (HAPs). The standards are set "at the level which ... provides an ample margin of safety to protect the public health from such hazardous air pollutant." These risk-based NESHAPs are located in 40 CFR 61. The NESHAPs program applies to all existing and new/modified sources. Congress directed EPA to develop a program to develop further the regulation of HAPs in Section 112 of the 1990 Clean Air Act Amendments (CAAA). While the standards

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for major sources of HAPs developed per this section are also designated as NESHAPs, they are established according to Maximum Achievable Control Technology (MACT). These technology-based NESHAPs are located at 40 CFR 63.

Nitrogen Oxides (NO_x) - Compounds whose molecules consist of nitrogen and oxygen.

Nonattainment New Source Review (NNSR) - A New Source Review permitting program for major sources in geographic areas that do not meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. Nonattainment NSR is designed to ensure that emissions associated with new or modified sources will be regulated with the goal of improving ambient air quality.

Part 70 Operating Permit- Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit: ≥ 10 tons per year of any toxic air pollutant; ≥ 25 tons of total toxic air pollutants; and ≥ 100 tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

PM_{10} - Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

Prevention of Significant Deterioration (PSD) - A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

Sulfur Dioxide (SO_2) - An oxide of sulphur.

Title V permit - See Part 70 Operating Permit.

Volatile Organic Compound (VOC) - Any organic compound which participates in atmospheric photochemical reactions; that is, any organic compound other than those which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.